

## DOBBS BLUFF, OIO ROAD ROCKFALL PROTECTION TAUMARUNUI

### ROCKFALL PROTECTION

#### Products: Galmac PVC Rockfall Netting

##### Problem

The high papa bluff located on Oio Road in the Ruapehu District, although not a high traffic volume road, serves as an important route for tourists to access the Whanganui River National Park for canoeing and other outdoor activities. Over the years, there has been continuous dropping of small fractured rocks from the slope face above Oio Road, with the debris needing to be removed on an almost daily basis. Although there have been no casualties, according to the locals there have been a number of near misses, and damage to vehicles passing by. With the increasing number of tourists traversing the area, it became apparent that protection work needed to be undertaken.

##### Solution

Rock fall protection works for this site have been considered for more than 20 years. Various protection schemes had been put forward. One of these, included cutting back the entire 55m high slope to a gentler profile or benching options. This however, involved an extensive amount of earthworks and was unaffordable.

After reviewing previous proposals, along with lengthy discussions among the engineers - GHD Ltd, the specialist geotechnical rope access contractors - Avalon Industrial Services Ltd, and the Ruapehu District Council, the final solution chosen for this site was a Galmac® PVC coated rockfall netting drapery system, incorporating the principal anchorage at the top of the slope, to hold the netting in position and to support the expected debris mass.

Prior to installing the rockfall netting, scaling works had to be carried out to remove loose surface material. The netting is not designed to prevent detachment of rock from the face but to contain the rock within the netting and control its movement down the slope to the base where periodic maintenance is carried out to clear the collected debris.

An experienced and competent contractor is critical for a successful rockfall netting installation as was the case at this site.

##### Client:

RUAPEHU DISTRICT COUNCIL

##### Main Contractor:

AVALON INDUSTRIAL SERVICES LTD

##### Consultant:

GHD LTD

##### Products used:

GALMAC PVC ROCKFALL NETTING

##### Construction date:

SEPTEMBER 2009



Avalon abseilers installing rockfall netting



Rockfall netting toe cabling not yet installed against rock face



Anchors at the top of the slope to hold the netting

## After Installation

Ever since its installation, the netting has been subject to rock falls of various sizes. Some repair to the netting was carried out to the areas damaged by larger rocks. This is done by lacing over the existing netting layer with additional netting. The rockfall netting has served its function by preventing the rock from falling on to the road. Repairs with additional netting is part of the periodic maintenance works.

Stronger types of netting i.e. Steelgrid or HEA panels are available if necessary to reduce the maintenance to a minimum or an "Active" approach is required.



Rockfall netting installation by Avalon abseilers near completion

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